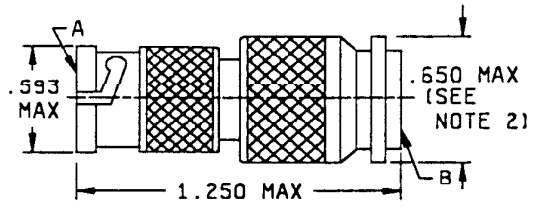
NOTE: The document identifier and heading has been changed on this page to reflect that this is a performance specification. There are no other changes to this document. The document identifier on subsequent pages has not been changed, but will be changed the next time this document is revised.

PERFORMANCE SPECIFICATION

ADAPTER, CONNECTOR, COAXIAL, RADIO FREQUENCY,
(BETWEEN SERIES BNC TO SERIES TNC), CLASS 2, STRAIGHT PLUG

This specification is approved for use by all Departments and Agencies of the Department of Defense.

The complete requirements for procuring the connector adapter described herein shall consist of this document and the latest issue of Specification MIL-PRF-55339.



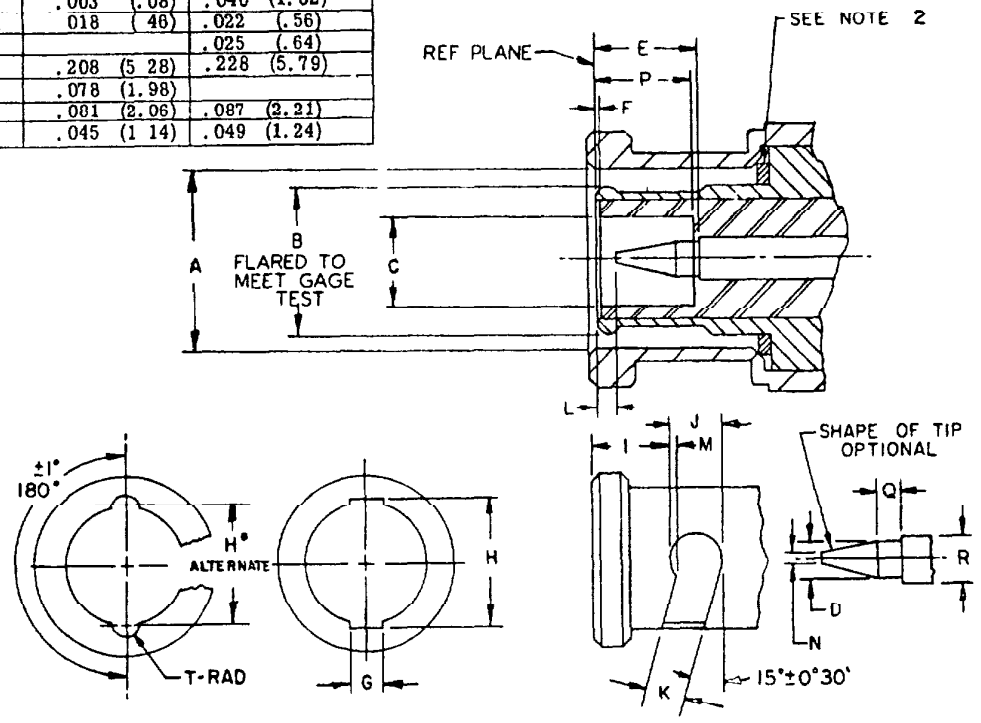
Reference	Series	Contact	Figure
A	BNC	Pin	2
B	TNC	Pin	3

Inches	mm
.593	15.06
.650	16.51
1.250	31.75

NOTES:
1. Dimensions are in inches
2. This dimension is the largest overall diameter of the connector..
3. Metric equivalents (to the nearest .01 mm) are given for general information only and are based upon 1 inch = 25.4 mm.
4. Shape of coupling nut optional.

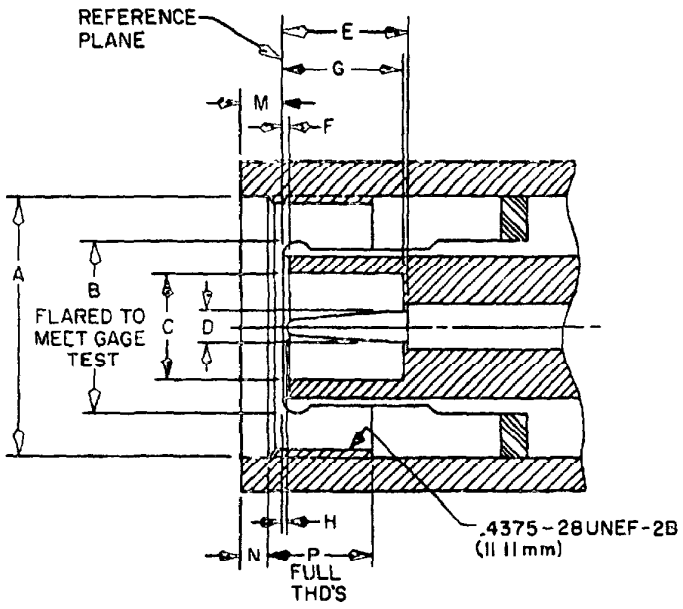
FIGURE 1. General configuration.

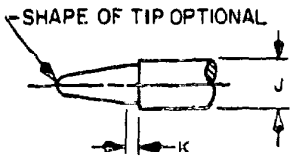
Ltr	Dimensions in inches with metric equivalents (mm) in parentheses	
	Minimum	Maximum
A	.385 (9.78)	390 (9 91)
B	Gage test	
C	190 (4 83)	
D	.052 (1 32)	054 (1.37)
E	.210 (5.33)	.230 (5.84)
F	.006 (15)	
G	.091 (2 31)	.097 (2.46)
H	463 (11.76)	.473 (12 01)
H*	.394 (10.01)	400 (10. 16)
I	.180 (4 57)	184 (4 67)
J	124 (3 15)	
K	.091 (2 31)	.097 (2.46)
L	.003 (.08)	.040 (1.02)
M	018 (46)	.022 (.56)
N		.025 (.64)
P	.208 (5 28)	.228 (5.79)
Q	.078 (1.98)	
R	.081 (2.06)	.087 (2.21)
T	.045 (1 14)	.049 (1.24)



NOTES
1. Metric equivalents (to the nearest 01 mm) are given for general information only and are based upon 1 inch = 25 4 mm.
2. In the mated condition the longitudinal force of the spring of the coupling mechanism shall exceed the pressure exerted by the sealing gasket by an amount necessary to insure butting of the outer contacts at the reference plane.

FIGURE 2. Mating dimensions for male terminations.





LTR	Dimensions in inches with metric equivalents (mm) in parentheses	
	Minimum	Maximum
A	.440 (11.18)	
B	Gage test	
C	.190 (4.83)	
D	052 (1.32)	.054 (1.37)
E	.210 (5.33)	230 (5.84)
F	.006 (.15)	
G	208 (5.28)	228 (5.79)
H	003 (.08)	040 (1.02)
J	081 (2.06)	087 (2.21)
K	078 (1.98)	
M		.078 (1.98)
N	063 (1.60)	
P	.156 (3.96)	

NOTES
1. Metric equivalents (to the nearest .01 mm) are given for general information only and are based upon 1 inch = 25.4 mm.
2. Three holes .027 (.69 mm) minimum diameter equally spaced for safety wiring. Location on coupling nut optional.
3. All undimensioned pictorial configurations are for reference purposes only.

FIGURE 3. Mating dimensions for pin terminations.

DESIGN AND CONSTRUCTION

General configuration See figure 1

Impedance 50 ohms, nom

Working voltage Sea level - 500 Vrms.
70,000 feet - 125 Vrms.

Frequency range. 0 to 4 GHz.

Temperature range -65° to +165°C.

PERFORMANCE (installation torque is not applicable).

Dimensions: See figures 1, 2, and 3.

Center contact retention Axial force - 6 lb, min
Torque - Not applicable.

		Series BNC	Series TNC
Force to engage and disengage	Longitudinal force -	3 lb, max	Not applicable
	Torque (in lb, max) -	2 5	2

	Series BNC	Series TNC
Coupling proof torque	Not applicable	15 in. lbs, min.

Mating characteristics

Outer contact:
Min test ring ID - 319 in , max
Ring finish - 16 microinches
Insertion force - 5 lb, max.
Insertion depth - .093 in , min
No. of insertions - 1.
Max test ring ID - .324 in , min.
Test ring finish - 16 microinches
Insertion depth - .031 in , max. of their tip ends.
No. of insertions - 1.

Permeability <2 0

Seal:
Pressurized - Not applicable.
Weatherproof - Not applicable.

Insulation resistance 5,000 megohms, min.

VSWR· 1 25 1, max at .5 to 4 GHz.

RF leakage (total)· -55 dB, min 2 to 3 GHz

RF insertion loss .2 dB, max, 3 GHz.
(115 $\sqrt{f\ (GHz)}$ dB max tested at 3 GHz)

Durability 500 cycles minimum at 12 cycles/min maximum The connector shall meet the mating characteristics and force to engage and disengage requirements

Dielectric withstanding Test voltage - 1,500 Vrms, min (sea level).

Contact resistance (milliohms, max)

Contact	Initial	After
Center	2.0	2.5
Outer	0.2	Not applicable

Vibration, high frequency Interruptions - 1 µs, max

Shock Test condition I.

Thermal shock Test condition C

Moisture resistance 200 megohms, min

Corona level Voltage - 375 V, min.
Altitude - 70,000 feet, min.

RF high potential withstanding voltage RF voltage - 1,000 Vrms, min.
Frequency - 5 MHz, min

Salt spray (corrosion) Test condition B.

	Series BNC	Series TNC
Coupling mechanism retention force.	100 lb,mmin	Not applicable

MARKING: As specified in MIL-A-55339.
Part No. M55339/39-00001

Custodians:
Army - EL
Navy - EC
Air Force - 85

Review activities:
Army - MU, MI, EL, AT
Navy - SH
Air Force - 11, 99
DSA - ES

User activities
Army - AT, MU
Navy - AS, MC
Air Force - 19

Preparing activity
Army - EL

Agent
DSA - ES

(Project 5935-2017-15)

SPECIFICATION ANALYSIS SHEET

Form Approved
Budget Bureau No 22-R255

INSTRUCTIONS This sheet is to be filled out by personnel, either Government or contractor involved in the use of the specification in procurement of products for ultimate use by the Department of Defense This sheet is provided for obtaining information on the use of this specification which will insure that suitable products can be procured with a minimum amount of delay and at the least cost Comments and the return of this form will be appreciated Fold on lines on reverse side staple in corner and send to preparing activity Comments and suggestions submitted on this form do not constitute or imply authorization to waive any portion of the referenced document(s) or serve to amend contractual requirements

SPECIFICATION MIL-A-55339/39 ADAPTER, CONNECTOR, COAXIAL, RADIO FREQUENCY (BETWEEN SERIES BNC TO SERIES TNC), CLASS 2, STRAIGHT PLUG

ORGANIZATION

CITY AND STATE

CONTRACT NUMBER

MATERIAL PROCURED UNDER A

☐ DIRECT GOVERNMENT CONTRACT ☐ SUBCONTRACT

1 HAS ANY PART OF THE SPECIFICATION CREATED PROBLEMS OR REQUIRED INTERPRETATION IN PROCUREMENT USE?

A GIVE PARAGRAPH NUMBER AND WORDING

B RECOMMENDATIONS FOR CORRECTING THE DEFICIENCIES

2 COMMENTS ON ANY SPECIFICATION REQUIREMENT CONSIDERED TOO RIGID

3 IS THE SPECIFICATION RESTRICTIVE?

☐ YES ☐ NO *(If "yes", in what way?)*

4 REMARKS *(Attach any pertinent data which may be of use in improving this specification If there are additional papers attach to form and place both in an envelope addressed to preparing activity)*

SUBMITTED BY *(Printed or typed name and activity Optional)*

DATE

DD FORM JAN 66 1426

REPLACES EDITION OF 1 OCT 64 WHICH MAY BE USED

ESC-FM 1068-68

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